

NORTH CAROLINA:

15A NCAC 18A .1961 MAINTENANCE OF SEWAGE SYSTEMS

(a) Any person owning or controlling the property upon which a ground absorption sewage treatment and disposal system is installed shall be responsible for the following items regarding the maintenance of the system:

- (1) Ground absorption sewage treatment and disposal systems shall be operated and maintained to prevent the following conditions:
 - (A) a discharge of sewage or effluent to the surface of the ground, the surface waters, or directly into groundwater at any time; or
 - (B) a back-up of sewage or effluent into the facility, building drains, collection system, or freeboard volume of the tanks; or
 - (C) a free liquid surface within three inches of finished grade over the nitrification trench for two or more observations made not less than 24 hours apart.Observations shall be made greater than 24 hours after a rainfall event.

The system shall be considered to be malfunctioning when it fails to meet one or more of these requirements, either continuously or intermittently, or if it is necessary to remove the contents of the tank(s) at a frequency greater than once per month in order to satisfy the conditions of Parts (A), (B), or (C) of this Paragraph. Legal remedies may be pursued after an authorized agent has observed and documented one or more of the malfunctioning conditions and has issued a notice of violation.

- (2) Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

(b) System management in accordance with Tables V(a) and V(b) of this Rule shall be required for all systems installed or repaired after July 1, 1992. After July 1, 1992, system management in accordance with Tables V(a) and V(b) shall be required for all existing Type V and Type VI systems.

(c) No Improvement Permit or Construction Authorization shall be issued for Type IV, Type V, or Type VI systems, unless a management entity of the type specified in Table V(b) is specifically authorized, funded, and operational to carry out this management program in the service area where the proposed system is to be located.

(d) A local health department may be the public management entity only for systems classified Type IV, V(a) and V(b) and only when specifically authorized by resolution of the local board of health.

(e) A contract shall be executed between the system owner and a management entity prior to the issuance of an Operation Permit for a system required to be maintained by a public or private management entity, unless the system owner and certified operator are the same. The contract shall include the specific requirements for maintenance and operation, responsibilities of the owner and system operator, provisions that the contract shall be in effect for as long as the system is in use, and other requirements for the continued proper performance of the system. It shall also be a condition of the Operation Permit that subsequent owners of the system execute such a contract.

(f) Inspections of the system shall be performed by a management entity at the frequency specified in Table V(b). The management entity shall report the results of their inspections to the local health department at the specified reporting frequency. However, where inspections indicate the need for system repairs, the management entity shall notify the local health department within 48 hours in order to obtain a Construction Authorization for the repairs.

(g) The management entity shall be responsible for assuring routine maintenance procedures and monitoring requirements in accordance with the conditions of the Operation Permit and the contract.

(h) Sewage systems with multiple components shall be classified by their highest or most complex system type in accordance with Table V to determine local health department and management entity responsibilities.

(i) Sewage systems not identified in this Rule shall be classified by the Division of Environmental Health after consultation with the appropriate commission governing operators of pollution control facilities.

(j) The local health department shall routinely review the performance and operation reports submitted in

accordance with Table V(b) of this Rule and shall perform an on-site inspection of the systems as required in Table V(a).

(k) The certified operator shall hold a valid and current certificate from the appropriate commission, and nothing in this Section shall preclude any requirements for system operators, in accordance with Article 3 of G.S. 90A.

Type IV Improvement	a. Any system with LPP	
	3 yrs. distribution	Permit, Construction Authorization, and Operation Permit
Type V Improvement	b. System with more than 1 pump or siphon	
	a. Sand filter pretreatment	
Type VI Improvement	12 mos. system	Permit, Construction Authorization, and Operation Permit
	b. Any > 3,000-GPD septic tank system with a nitrification field designed for > 1500 GPD	
	c. Aerobic Treatment Unit (ATU)	
	d. Other mechanical, biological, or chemical pretreatment plant (< 3000 GPD)	
Type VI Improvement	a. Any > 3,000 GPD system	
	6 mos. with mechanical, biological, or chemical pretreatment system plant	Permit, Construction Authorization, and Operation Permit
	b. Wastewater reuse/recycle	

TABLE V(b)

MANAGEMENT ENTITY RESPONSIBILITIES

System Reporting Classification Frequency	Management Entity	Minimum System Inspection/Maintenance Frequency
Type I N/A	Owner	N/A
Type II N/A	Owner	N/A

N/A	Type III	Owner	N/A	
12 mos.	Type IV	Public Management Entity with a Certified Operator or a private Certified Operator	2/yr.	
mos.	Type V	Public Management Entity With a Certified Operator or a private Certified Operator	a. 2/yr (0-1500 GPD) 4/yr (1500-3000 GPD) 12/yr (3000-10000 GPD) 1/wk (> 10000 GPD) b. 12/yr (3000-10000 GPD) 1/wk (> 10000 GPD) c. 4/yr. d. 12/yr.	6
mos.	Type VI	Public Management Entity With a Certified Operator	a. 1/wk(3000-10000 GPD) 2/wk(10000-25000 GPD) 3/wk(25000-50000 GPD) 5/wk(> 75000 GPD) b. 12/yr.	3

Washington State:

WAC 46-272A-0270 OperationOperationOperation, monitoringMonitorMonitoring, and maintenanceMaintenance-OwnerOwnerOwner responsibilities.

The OSSOSSOSS ownerOwnerOSS ownerOSSOSS owner is responsibleResponsible for operatingOperate, monitoringMonitorMonitoring, and maintaining the OSS to minimize the riskRisk of failureFailure, and to accomplish this purpose, shall:

Obtain approvalApproveApproval from the local health officerLocal health officerLocal health officer before repairing, altering or expanding an OSSOSSOSS;

Secure and renewRenew contracts for periodic maintenanceMaintenance where required by the local health jurisdictionJurisdiction;

Obtain and renewRenew operationOperationOperation permitsPermitPermit if required by the local health jurisdictionJurisdiction;

Assure a complete evaluationEvaluateEvaluation of the system components and/or propertyPropertyProperty to determine functionality, maintenanceMaintenance needs and complianceCompliance with regulations and any permitsPermitPermit:

At least once every three years for all systems consisting solely of a septic tankSeptic tank and gravityDistributionGravity distributionGravity distribution SSASSSASSSAS;

Annually for all other systems unless more frequent inspectionsInspection are specified by the local health officerLocal health officerLocal health officer;

Employ an approvedApproveApproved pumperPumper to remove the septageSeptage from the tank when the level of solids and scum indicates that removal is necessary;

Provide maintenanceMaintenance and needed repairs to promptly return the system to a proper operatingOperate condition;

Protect the OSSOSSOSS area and the reserve areaReserve area from:

CoverCover by structures or imperviousImpervious material;

Surface drainageDrainage, and direct drains, such as footing or roof drainFooting or roof drains. The drainage must be directed away from the area where the OSSOSSOSS is located;

SoilSoilSoil compaction, for example by vehicular trafficVehicular traffic or livestock; and

Damage by soilSoilSoil removalSoilSoil removal and gradeGradeGrade alterationGradeGrade alteration;

Keep the flow of sewageSewageSewage to the OSSOSSOSS at or below the approvedApproveApproved operatingOperate capacityOperating capacity and sewage qualitySewageSewage quality;

OperateOperate and maintainMaintain systems as directed by the local health officerLocal health officerLocal health officer;

Request assistance from the local health officerLocal health officerLocal health officer upon occurrence of a system failureFailure or suspected system failure; and

At the time of propertyPropertyProperty transferPropertyProperty transfer provide to the buyer, maintenanceMaintenance records, if available, in addition to the completed seller disclosure statement in accordance with chapter 64.06 RCWRCW for residential real property transfers.

Persons shall notPersons shall not:

Use or introduce strong bases, acids or chlorinated organic solvents into an OSSOSSOSS for the purpose of system cleaning;

Use a sewageSewageSewage system additiveAdditive unless it is specifically approvedApproveApproved by the department; or

Use an OSSOSSOSS to disposeDispose of wasteWaste components atypical of sewageSewageSewage from a residential source

Oregon:

Service contracts.

(a) The owner of an ATT system must maintain a contract with a maintenance provider certified by the manufacturer to serve and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned. A single service contract and maintenance provider for both the ATT and the other components is preferable to multiple contracts for maintenance providers.

(b) The service contract must provide the following.

(A) Provide for a minimum of four inspection and service visits by a maintenance provider scheduled once every six months over the two-year period to inspect, adjust, and service the ATT.

(B) Provide for an ATT-effluent quality inspection by a maintenance provider consisting of but not limited to a visual assessment for color, turbidity, and scum overflow; an olfactory assessment for odor; and any other performance assessment or operational diagnosis, which may include sampling of treated effluent (post-disinfection if disinfection is used) necessary to determine or ensure proper operation of the facility.

(C) Include a clause stating that the maintenance provider must notify the system owner in writing about any improper system function that cannot be remedied during the time of inspection and include an estimated date of correction.

(D) Include other information and conditions of the agreement such as:

(i) Owner's name and address;

(ii) Property address and legal description;

(iii) Permit requirements;

(iv) Contact information for the owner, maintenance provider, and agent;

(v) Details of service to be provided, including the service required in this section;

(vi) Schedule of maintenance provider duties;

(vii) Cost and length of service contract and time period covered;

(viii) Details of any warranty; and

(ix) Owner's responsibilities under the contract for routine operation of the onsite system.

(c) Maintenance providers. A maintenance provider under a contract required in this

section must comply with the following requirements.

(A) A maintenance provider must observe and record conditions in the drainfield during all operation and maintenance activities for the ATT and other system components and report those observations to the system owner. System owners must report evidence of any system failures to the agent and take appropriate action approved by the agent to correct the problem. Any repair or alteration must comply with OAR 340-071-0215, 340-071-0210, and other applicable requirements in this division.

(B) Maintenance providers must maintain accurate records of their service contracts, customers, performance data, and time lines for renewing the contracts. These records must be available for inspection upon request by the agent.

(C) Within 30 days of their termination or expiration, maintenance providers must notify the agent of service contracts that are terminated or not renewed.

(D) Maintenance providers must make emergency service available within 48 hours of a service request.

(E) The maintenance provider must submit the annual report required in OAR 340-071-0130 (17)(a) and the annual evaluation fee in OAR 340-071-0140(3)(k)(B) for each system under contract to be serviced by the maintenance provider.

(F) A maintenance provider must be certified by the manufacturer to provide service on an ATT.

Texas:

(a) A maintenance provider shall:

- (1) possess a current license from the executive director;
- (2) ensure maintenance of accurate records of fees, inspections, and reports;
- (3) satisfy the requirements of the maintenance contract between the homeowner of the OSSF system and the maintenance provider according to §285.7 of this title (relating to Maintenance Requirements);
- (4) maintain a current address and phone number with the executive director and submit any change in address or phone number to the executive director in writing within 30 days after the date of the change; and
- (5) perform maintenance on each OSSF system under executed contract, keep a maintenance record, and submit maintenance reports to the permitting authority and the owner of the OSSF for whom the installer has contracted to provide maintenance, according to §285.7 of this title.

(b) A maintenance technician shall:

- (1) possess a current registration from the executive director;
- (2) represent his supervising maintenance provider while performing maintenance on an OSSF;
- (3) perform services associated with OSSF maintenance under the direct supervision and direction of the maintenance provider on-site or be in direct communication with the maintenance provider;
- (4) not receive compensation for OSSF maintenance from anyone except the supervising maintenance provider;
- (5) maintain a current address and phone number with the executive director and submit any change in address or phone number to the executive director in writing within 30 days after the date of the change; and
- (6) not advertise or otherwise portray themselves as a maintenance provider.

Florida:

4. The owner of an engineer-designed performance-based system must maintain a current maintenance service agreement with a maintenance entity permitted by the department. The maintenance entity shall obtain a biennial system operating permit from the department for each system under service contract. The department shall inspect the system at least annually, or on such periodic basis as the fee collected permits, and may collect system-effluent samples if appropriate to determine compliance with the performance criteria. The fee for the biennial operating permit shall be collected beginning with the second year of system operation. The

maintenance entity shall inspect each system at least twice each year and shall report quarterly to the department on the number of systems inspected and serviced.

Minnesota

7080.2450 MAINTENANCE.

Subpart 1. **General.** All ISTS must be operated under the regulatory requirements of part 7082.0600. ISTS and all components must be maintained in compliance with this chapter and manufacturer

65 INDIVIDUAL SUBSURFACE SEWAGE TREATMENT SYSTEMS 7080.2450

requirements. Subpart 2, items A and B, are intended to apply to ISTS and systems that do not qualify as

an ISTS, but receives sewage such as cesspools, drywells, leaching pits, or other pits.

Subp. 2. **Frequency of assessment.** The owner of an ISTS or the owner's agent shall regularly, but

in no case less frequently than every three years:

A. assess whether sewage tanks leak below the designed operating depth and whether sewage tank tops, riser joints, and riser connections leak through visual evidence of major defects; and

B. measure or remove the accumulations of scum, grease, and other floating materials at the top of each septic tank and compartment, along with the sludge, which consists of the solids denser than

water.

Subp. 3. **Removal of material.**

A. All solids and liquids must be removed by pumping from all tanks or compartments in which the top of the sludge layer is less than 12 inches from the bottom of the outlet baffle or transfer hole

or whenever the bottom of the scum layer is less than three inches above the bottom of the outlet baffle or

transfer hole. Total sludge and scum volume must not be greater than 25 percent of the tank's liquid capacity.

B. Removal of accumulated sludge, scum, and liquids from septic tanks and pump tanks must be through the maintenance hole. The removal of solids from any location other than the maintenance hole

is not a compliant method of solids removal from a sewage tank, and this method does not fulfill the solids

removal requirement of this part or a management plan. Liquid and solids removal from clean-out pipes is

allowed for holding tanks.

C. After removal of solids and liquids, the system shall be brought into compliance with part 7080.1970, item C. Covers secured by screws shall be refastened in all screw openings. If the maintenance

hole does not extend to finish grade, it must be brought into compliance with part 7080.1970, item C, or

secured by covering with a minimum of 12 inches of soil.

D. Pump tanks must be maintained according to this part. Sludge must be removed if within one inch of the pump intake.

Subp. 4. **Toilet waste treatment devices and privies.**

A. For primitive dwellings using toilet waste treatment devices in low dwelling density areas, septage disposal from these devices by the owner must be in accordance with local ordinances. If no

ordinance exists, the septage must not be discharged to surface waters, drainageways, steeply sloping areas, or wet areas in a manner or volume that is harmful to the environment or public health or that creates a nuisance. The material must be buried or covered with soil. For site conditions not met in this subpart, the solids disposal from toilet waste treatment devices shall be according to subpart 6 by a licensed maintenance business.

B. When the privy is filled to one-half of its capacity, the solids must be removed. Abandoned pits must have the sewage solids and contaminated soil removed and must be filled with clean earth and slightly mounded to allow for settling. Removed solids shall be disposed of according to subpart 6.

Subp. 5. **Additives.** ISTS additives, which are products added to the sewage or to the system with the intent to lower the accumulated solids in sewage, must not be used as a means to reduce the frequency of proper maintenance and removal of sewage solids from the sewage tanks as specified in this part. The use of additives does not fulfill the solids removal requirement of this part or a management plan. ISTS additives that contain hazardous materials must not be used in an ISTS.

British Columbia

17 MAINTENANCE AND INSPECTION

17.1 Requirements of the Sewerage System Regulation

17.1.1 Owner

Section 10 of the Sewerage System Regulation requires that an owner ensure that a sewerage system on the owner's land is maintained in accordance with the maintenance plan provided in respect of the sewerage system. In addition the owner must keep records of maintenance carried out according to the maintenance plan.

17.1.2 Maintenance Provider

Section 12 of the Regulation indicates that a person commits an offence if the person maintains a sewerage system without proper qualifications, i.e., without being an Authorized Person.

The Authorized Person must prepare a maintenance plan for the owner/operator. To determine whether the maintenance plan is consistent with standard practice, the AP may have regard to the Standard Practice Manual. (Section 9).

The maintenance plan must be submitted with a letter of certification, indicating that if

operated and maintained as set out in the maintenance plan, the sewerage system will not cause or contribute to a health hazard. (Section 9(1) (b)).

An Authorized Person who makes a repair or alteration to a sewerage system must provide the owner with an amendment to the maintenance plan if:

- the work is not already covered by the filing of the sewerage system with the Health Authority; and,
- the maintenance plan provided as part of the letter of certification is, if followed, no longer sufficient to ensure that the sewerage system does not cause, or contribute to, a health hazard.

17.2 Maintenance Plan

The Authorized Person must prepare the maintenance plan so that it provides the user/operator and the service person with information about the system necessary to operate and maintain it. The user/operator and the service person should be able to follow the line of reasoning used when the system was designed.

The maintenance plan must include design and measured performance data for equipment installed, timer settings, draw-down depths, litres per cm of tank and actual pump delivery (L/min). The maintenance plan must explain the assumptions made to establish the design parameters and must include the following:

- a list of system “Do’s and Don’ts”,
- a list of relevant contacts related to system components and ongoing operations,
- an emergency number to call, and
- a list of the responsibilities of the user/operator.

17.3 Frequency of Inspection and Maintenance

The frequency of inspection of treatment and disposal systems depends on of the level of treatment. Septic tanks must be pumped regularly to ensure proper functioning. If the septic system is not pumped in a timely manner, solids will build up, bypass the effluent tee or baffle and clog the soil absorption system — eventually resulting in hydraulic failure (i.e., plumbing backup and wastewater appearing on the ground surface).

The following table indicates the typical frequency of pump-out based on the number of residents and the volume of the septic tank.

The table is consistent with the literature and with typical service schedules set by suppliers of Type 2 systems, establishing a level of service for certified practitioners in a competitive environment. As this applies only to new installations or repairs, local government is encouraged to establish onsite system maintenance and monitoring programs as described in

“Toolkit for the Development of Management Programs for On-Site Sewage Systems”. 2003.

Environment Canada Georgia Basin Ecosystem Initiative.

Table 17-1: Inspection frequencies

Component of the System Inspection Frequency

Type 1 treatment system with gravity flow 3 years (pump out as necessary, when 60 % of liquid depth is sludge and scum. See table 17-2 below)

Type 2 and 3 treatment systems (i.e., aerobic treatment units (ATUs), intermittent sand filters, re-circulating gravel filters, attached growth systems) 3 months (pump out ATUs when 6,000 mg/L TSS in aeration tank or <10% clear zone in 30 min settling test)

Pressure distribution systems for Types 1, 2 or 3: 6 months after start-up, then yearly.

Source